

Epi Monthly Report

Using ESSENCE to Track a Gastrointestinal Outbreak in a Homeless Shelter in Miami-Dade County, 2008

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OBJECTIVE

To illustrate how Miami-Dade County Health Department (MDCHD) utilized ESSENCE in order to track a gastrointestinal (GI) outbreak in a homeless shelter

BACKGROUND

Although Electronic Surveillance System for the Early Notification of Community Based Epidemics (ESSENCE) provides tools to detect a significant alert regarding an unusual public health event, combining that information with other surveillance data, such as 911 calls, school absenteeism and poison control records, has proved to be more sensitive in detecting an outbreak. On Monday, June 16, Florida Poison Information Network, which takes after-hours and weekend calls for MDCHD, contacted the Office of Epidemiology and Disease Control (OEDC) about five homeless persons that visited the same hospital simultaneously with gastro-intestinal symptoms on Saturday, June 14. Poison control staff asked MDCHD to investigate further to determine whether it was an outbreak.

METHODS

In 2008, a specialized query for the words ^diarrhea^, or, ^vomit^, which accounts for misspellings, was added to daily communicable disease queries in ESSENCE in order to detect a gastrointestinal outbreak. Staff monitor clusters by resident zip code, hospital and time of emergency department (ED) visit to explore a potential outbreak. If clustering is suspected, MDCHD staff contact the hospital Infection Control Practitioner (ICP) to obtain additional patient information and confirm potential outbreaks.

RESULTS

Between June 14 and 17, 2008, three small clusters by resident zip code and ED visit time were detected in a southern Miami-Dade County hospital with diarrhea and/or vomiting as chief complaints. The hospital ICP was contacted immediately to confirm the cases. It was discovered through the ICP that 12 ill individuals arrived from the same homeless shelter throughout the day. Among 12 ill individuals, 9 (75.0%) were male and ages ranged from 20 to 55 years. The homeless shelter can house 300 persons and is typically for

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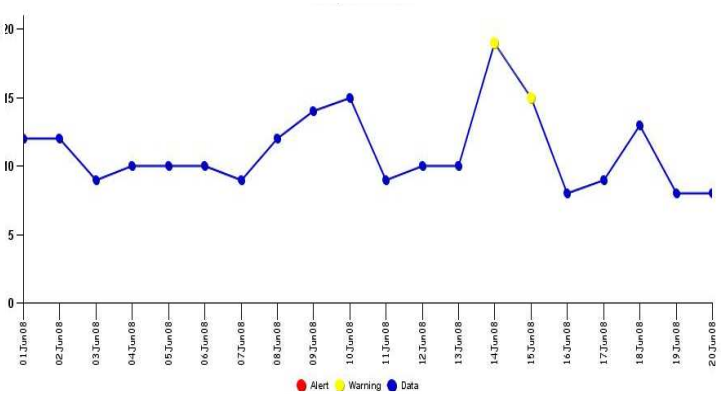
residents staying approximately 60 days or more. MDCHD staff contacted the Director of the shelter and a site visit was conducted on Wednesday, June 18 by MDCHD Office of Environmental Health and on Friday, June 20 by OEDC staff.

Interviews with the Director, Nursing Director and Cafeteria Manager demonstrated that although there is a clinic at the shelter, it is only for adults and it is closed on weekends. Additionally, no physician was present on Monday, June 16. Therefore, the ill shelter residents were referred to visit the hospital. The environmental inspection showed the cafeteria was clean and the facility followed strict guidelines for safety. Foods that are prepared from outside sources can not be served. However, it was discovered that on June 16, the residents that became ill did not eat food from the cafeteria but rather from food that was served outside in the parking lot from a local organization that made donations. Since some residents stayed at the shelter for a short period of time, interviews could not be conducted with all of the ill persons

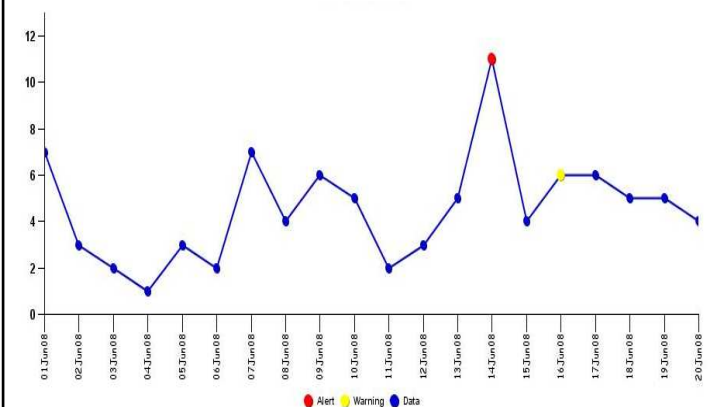
Spatial-Temporal and Chief Complaint Clustering in an Emergency Department

Date	Time	Hospital	Zipcode	Sex	ChiefComplaintParsed	Race	Ethnicity
6/14/2008	8:28 PM	A	SAME	M	VOMITING, DIARRHEA	WHITE	
6/14/2008	8:55 PM	A	SAME	M	VOMITING, DIARRHEA	WHITE	HISPANIC
6/14/2008	8:58 PM	A	SAME	F	VOMITING, DIARRHEA	WHITE	HISPANIC
6/14/2008	9:26 PM	A	SAME	M	VOMITING, DIARRHEA	WHITE	HISPANIC
6/14/2008	9:28 PM	A	SAME	M	VOMITING, DIARRHEA	BLACK	
6/16/2008	6:41 PM	A	SAME	M	FEVER, DIARRHEA	WHITE	
6/16/2008	6:46 PM	A	SAME	M	ABD PAIN/NVD	WHITE	HISPANIC
6/16/2008	6:50 PM	A	SAME	M	RLQ PAIN/NAUSEA, VOMITING	WHITE	HISPANIC
6/16/2008	6:57 PM	A	SAME	M	VOMITING, DIARRHEA, STOMACH	BLACK	HISPANIC
6/17/2008	7:24 AM	A	SAME	F	HEADACHE AND VOMITING	WHITE	
6/17/2008	7:31 AM	A	SAME	M	ABD PAIN, VOMITING	WHITE	HISPANIC

Daily ED Visits to Hospital A with Chief Complaints of Diarrhea/Vomiting, 06/01-20/2008



Daily ED Visits with Chief Complaints of Diarrhea/Vomiting in Zip Code 33033, 06/01-20/2008

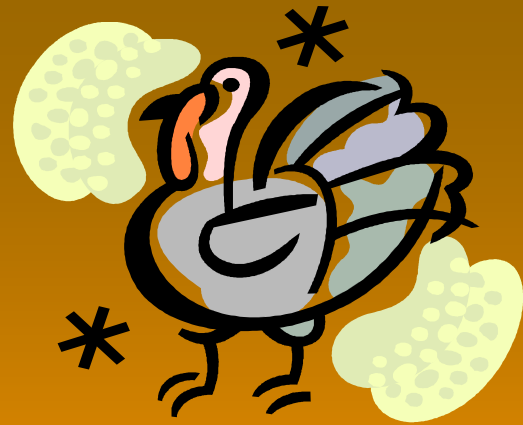


CONCLUSIONS

This study verified that combined with other surveillance systems, ESSENCE can be useful to follow an outbreak by using a specialized query in addition to the automated syndrome alert. Since a gastrointestinal illness alert was not automated because of the small number of persons involved, this demonstrates how important it is to carefully monitor all clusters and not only those automatically created by the system. Additionally, outbreak investigations can be facilitated by working with multiple partners involved in surveillance.

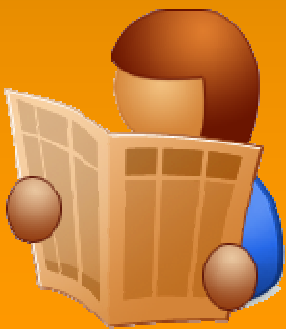
NOVEMBER IS...

- Adoption Month, National
- Alzheimer's Disease Awareness Month
- Diabetes Month, American
- Flu and Pneumonia Campaign
- Diabetes Month
- Lung Cancer Awareness Month



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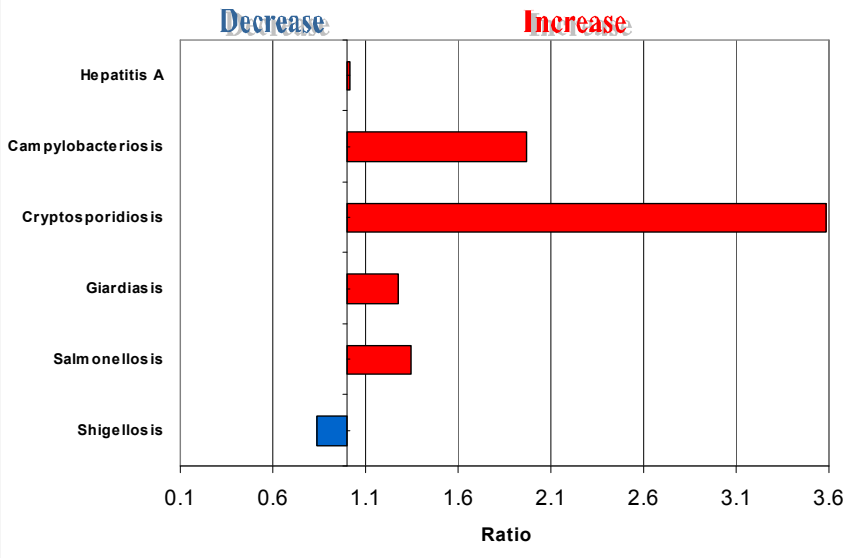
Epi Monthly News:



Office of Epidemiology & Disease Control and Special Immunization Program have officially merged. We warmly welcome Immunization Staff ! Thus, there has been a few changes. Our office name is now, “Epidemiology, Disease Control & Immunization Services.” Immunization Services main number is 305-470-5660 and to make an appointment the number is 786-845-0550. We will also be updating our intranet/internet WebPages for both Epi and Immunization.

Have a Happy Thanksgiving!

Selected Notifiable Disease Reports, Miami-Dade County, Comparison with Historical Data, Oct, 2008



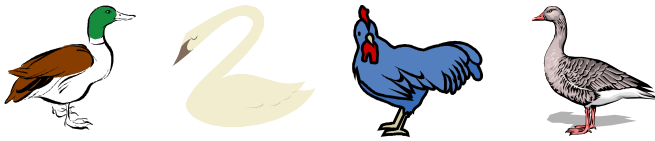
LIFESTYLE

**TO REPORT ANY DISEASE AND FOR INFORMATION CALL:
Office of Epidemiology and Disease Control**

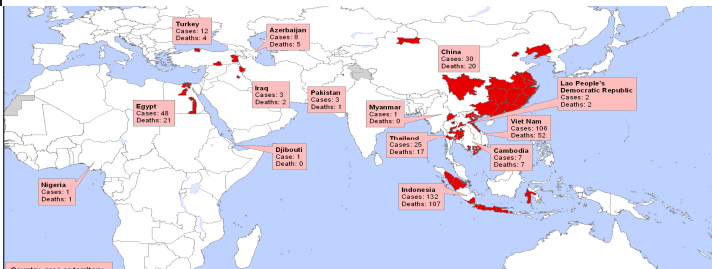
- Childhood Lead Poisoning Prevention Program305-470-6877
- Hepatitis305-470-5536
- Other diseases and outbreaks305-470-5660
- HIV/AIDS Program305-470-6999
- STD Program305-325-3242
- Tuberculosis Program 305-324-2470
- Immunization Service;305-470-5660
- To make an appointment.....786-845-0550

AVIAN FLU WATCH

Unless indicated, information is current as of
September 2008



- Since 2003, there have been 387 human cases of avian influenza (H5N1) confirmed by the World Health Organization (WHO). Of these, 245 cases have died. This means there is a 63% (245/387) fatality rate.
- **15 Countries with confirmed human cases** include Bangladesh, Cambodia, China, Djibouti, Indonesia, Thailand, Vietnam, Iraq, Azerbaijan, Egypt, Turkey, Nigeria, Pakistan, Myanmar, and Lao People's Democratic Republic .



- **No human cases of avian influenza (H5N1) have been reported in the United States.**
 - **H5N1 has been confirmed in birds in several other countries since 2003.** H5N1 has been documented in birds in more than 30 countries in Europe & Eurasia, South Asia, Africa, East Asia and the Pacific, and the Near East. For a list of these countries, visit the World Organization for Animal Health Web Site at :
http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm.
 - **No restrictions on travel to affected countries have been imposed.** Travelers should avoid contact with live poultry and monitor their health for ten days after returning from an affected country.
- SOURCES: WHO, OIE, CDC

PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

The Miami-Dade County Health Department
NEEDS Influenza Sentinel Providers!!

Sentinel providers are key to the success of the Florida Department of Health's Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact **Erin O'Connell** at 305-470-5660.

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Miami-Dade County Health Department, Office of Epidemiology and Disease Control, The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Lizbeth Londoño at 305-470-6918.

Monthly Report
Selected Reportable Diseases/Conditions in Miami-Dade County,
October 2008

Diseases/Conditions	2008 this Month	2008 Year to Date	2007 Year to Date	2006 Year to Date	2005 Year to Date	2004 Year to Date
AIDS ^{*Provisional}	66	995	678	981	1046	1148
Campylobacteriosis	19	128	123	143	115	122
Ciguatera Poisoning	0	19	4	0	0	0
Cryptosporidiosis	11	52	41	27	27	16
Cyclosporiasis	0	5	0	0	11	2
Dengue Fever	1	6	3	2	3	4
<i>E. coli</i> , O157:H7	0	3	3	1	0	3
<i>E. coli</i> , Non-O157	0	0	2	0	1	1
Encephalitis (except WNV)	0	5	3	0	0	1
Encephalitis, West Nile Virus	0	0	1	0	15	0
Giardiasis, Acute	28	217	218	182	185	245
Hepatitis A	5	29	29	43	54	37
Hepatitis B	0	14	18	22	39	28
HIV ^{*Provisional}	105	1359	1206	988	1120	1395
Influenza A (H5)	0	0	0	0	0	0
Influenza Isolates	0	0	0	0	0	0
Influenza Novel Strain	0	0	0	0	0	0
Influenza, Pediatric Death	0	0	0	0	0	0
Lead Poisoning	14	155	133	125	146	264
Legionnaire's Disease	0	6	1	9	6	7
Leptospirosis	0	0	0	0	2	0
Lyme disease	2	8	7	0	0	3
Malaria	2	11	9	14	8	16
Measles	0	0	0	0	0	1
Meningitis (except aseptic)	0	3	8	12	11	10
Meningococcal Disease	0	8	8	12	6	18
Mumps	2	5	3	0	0	0
Pertussis	3	22	22	5	9	9
Rubella	0	1	0	0	0	0
Rubella, Congenital	0	0	0	0	0	0
Salmonellosis	70	419	333	478	469	370
Shigellosis	12	53	107	117	223	137
<i>Streptococcus pneumoniae</i> , Drug Resistant	6	90	72	87	56	58
Tetanus	0	0	0	0	0	0
Toxoplasmosis	1	1	2	0	9	7
Tuberculosis ^{*Provisional}	13	147	135	154	165	196
Typhoid Fever	0	1	2	6	2	3
<i>Vibrio cholera</i> Type O1	0	0	0	0	0	0
<i>Vibrio cholera</i> Non-O1	0	0	0	0	0	0
<i>Vibrio</i> , Other	0	0	0	0	0	0
West Nile Fever	0	0	0	0	0	6



*Data on AIDS are provisional at the county level and are subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.